In Arduino IDE, go to:

**Sketch** → **Include Library** → **Manage Libraries**  
Search for **AESLib** and install it.

#include <DHT.h>

#include <AESLib.h>

#define DHTPIN 2

#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

AESLib aesLib;

String aes\_key = "1234567890123456"; // 16-char AES key

byte aes\_iv[N\_BLOCK] = { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 }; // Initialization Vector

String encryptData(String data) {

char encrypted[128];

aesLib.encrypt64(data.c\_str(), data.length(), encrypted, aes\_key.c\_str(), aes\_iv);

return String(encrypted);

}

String decryptData(String encryptedData) {

char decrypted[128];

aesLib.decrypt64(encryptedData.c\_str(), encryptedData.length(), decrypted, aes\_key.c\_str(), aes\_iv);

return String(decrypted);

}

void setup() {

Serial.begin(9600);

dht.begin();

Serial.println("Encryption Demo Started...");

}

void loop() {

float temp = dht.readTemperature();

float hum = dht.readHumidity();

if (isnan(temp) || isnan(hum)) {

Serial.println("Failed to read from DHT sensor!");

return;

}

String plainText = "Temp:" + String(temp) + ",Hum:" + String(hum);

// Encrypt

String encrypted = encryptData(plainText);

Serial.println("Encrypted: " + encrypted);

// Decrypt

String decrypted = decryptData(encrypted);

Serial.println("Decrypted: " + decrypted);

Serial.println("-----------------------");

delay(5000);

}